

REMARKS

Claims 2, 5, and 8-11 are pending in the application. Claim 17 has been canceled.

Specification

Minor changes have been made to the specification to place it in better form for U.S. practice.

Claim Rejections - 35 U.S.C. § 103

(a) Claims 2, 8, 9, and 11 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Torii et al. (USP 5,746,269) in view of Tanaka et al. (USP 6,474,075). This rejection is respectfully traversed.

In the Office Action, the Examiner alleges that the Torii reference discloses the basic inventive concept of the present invention except for forming the plates from a resin and pressing the projections into the stacks. Therefore, the Examiner relies on the Tanaka reference and states that it discloses the missing features. Applicants respectfully disagree.

Torii discloses, for example in Fig. 5, a plurality of mesh plates 57A, 57B stacked together. As shown in the figure, each mesh plate is provided with a plurality of fluid passage holes 37h. However, the mesh plate (corresponds to the “film-shaped resin member” of the present invention) does not include “a projection formed by subjecting a surface of said resin member to plastic deformation and having an opening on its tip,” as recited in claims 2 and 9. Therefore, no gap is provided “between layers” of the mesh plates.

Further, even assuming that a reference marking portion 51 that extends outwardly from the periphery of each mesh plate in a radial direction thereof corresponds to the “projection” of the present invention, the reference marking portion 51 is used for an alignment of the mesh plates when stacking the plates, such that the fluid passage holes 37h are successively aligned to form working gas passageways linearly or in a curve in the direction of stack in the mesh plate stack structure. Therefore, Torii is totally different from the invention of the present application as recited in claims 2 and 9.

Tanaka merely discloses a regenerator obtained by winding a resin film 2 having ribs 3 formed on the main surface to form a cylindrical shape. In Tanaka, however, the resin film 2 no "opening," as recited in claims 2 and 9. Therefore, Tanaka fails to disclose or suggest the feature recited in claims 2 and 9 of the present application.

One of the distinctive features of the present invention is to provide an "an opening" at the tip of a projection. Torii and Tanaka, taken singly or in combination, fails to disclose or suggest such a feature. Therefore, one skilled in the art would not conceive the regenerator of the Stirling refrigerator of the present invention based on Torii and Tanaka.

Claim 8, dependent on claim 2, is allowable at least for its dependency on claim 2.

Claim 11, dependent on claim 9, is allowable at least for its dependency on claim 9.

In view of this, the Examiner is respectfully requested to reconsider and withdraw this rejection.

(b) Claims 5 and 10 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Torii in view of Tanaka, and further in view of Yaron et al. (USP 5,129,177). This rejection is respectfully traversed.

Claim 5, dependent on claim 2, is allowable at least for its dependency on claim 2.

Claim 19, dependent on claim 9, is allowable at least for its dependency on claim 9.

The Examiner is respectfully requested to reconsider and withdraw this rejection.

(c) Claim 17 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Torii in view of Tanaka, and further in view of Aull et al. (USP 6,640,427). This rejection is respectfully traversed.

Claim 17 has been canceled, thus rendering this rejection moot.

In view of this, the Examiner is respectfully requested to reconsider and withdraw this rejection.

Conclusion

Accordingly, in view of the above amendments and remarks, reconsideration of the rejections and objections, and allowance of the pending claims are earnestly solicited.

Application No. 10/532,826
Amendment dated December 18, 2007
Reply to Office Action of September 18, 2007

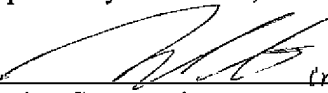
Docket No.: 0033-0999PUS1

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Maki Hatsumi Reg. No. 40,417 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

Dated: December 18, 2007

Respectfully submitted,

By  (reg. # 40,417)
Charles Gorenstein
Registration No.: 29,271
BIRCH, STEWART, KOLASCH & BIRCH, LLP
8110 Gatehouse Road, Suite 100 East
P.O. Box 747
Falls Church, Virginia 22040-0747
(703) 205-8000
Attorney for Applicant